

IN THE SPECIFICATION:

Please replace the paragraph appearing at column 5, lines 1-3, of the present reissue application submitted on August 26, 1999, with the following paragraph.

--FIGS. 37(a) and 37(b) diagrammatically illustrate an electron-emitting device comprising two kinds of fine particles arranged in a dispersed state.--

Please replace the paragraph appearing at column 9, lines 47-52, of the present reissue application submitted on August 26, 1999, with the following paragraph.

--As to the dimension of electrode spacing L, the electrodes may suitably oppose each other with a space of from several hundred angstroms to several ten μm , and spacing width W may suitably be approximately from several μm to several mm. However, they are by no means limited to these dimensions.--

Please replace the paragraph starting at column 13, line 50, and ending at column 14, line 7, of the present reissue application submitted on August 26, 1999, with the following paragraph.

--In FIG. 16, the numeral 14 denotes a glass substrate commonly called as colored glass, which is glass that contains metal colloid fine particles 15. The numeral 1 or

2 denotes an electrode provided on the substrate. The metal colloid fine particles in the colored glass may suitably have a particle diameter of from 20 angstroms to 6,000 angstroms, more desirably from 100 angstroms to 2,000 angstroms. Also, the density of the fine particles, though variable depending on the particle diameter or materials for the fine particles, may suitably be in such a state that particles are spatially apart and electrically connected in the vicinity of a drive voltage. To make such colored glass, it can be readily prepared by a commonly often used technique, namely, a method in which colorant raw materials such as AuCl_3 and AgNO_3 are dissolved in main components of the glass, which is then subjected to heat treatment for 10 to 20 minutes at temperatures of from 600° C. to 900° C. to deposit gold colloid or silver colloid fine particles in the glass. In the substrate prepared according to such a commonly available method, the metal fine particles are little deposited out of the glass surface, and therefore have good smoothness of the substrate surface on which the electrodes are formed, thus bringing about the advantage that the electrodes in this device can be made to have a smaller thickness.--

IN THE CLAIMS

Please amend Claims 56, 69, 73, and 85 to read as follows.¹

56. (Five Times Amended) A display apparatus comprising:
an electron source plate including:
a substrate, and
a plurality of electron emission elements arranged in a matrix
of rows and columns on said substrate, each electron emission element including:
a first electrode disposed on an upper surface of said
substrate,
a second electrode disposed on the upper surface of
said substrate, said first and second electrodes both lying in substantially a same plane that
is substantially parallel to the upper surface of said substrate; and
an electron-emission layer having an electron
emission region included in at least a portion thereof, said electron emission region
containing an electrical discontinuity, at least a portion of said electron-emission layer
extending from a surface of the first electrode to a surface of the second electrode, for
emitting an electron from the electron emission region upon an application of a low voltage

^{1/} The claims amended herein are shown completely underlined, since they were previously added in this reissue application (see, e.g., MPEP § 1453). Applicants understand that it is not necessary to supply a complete listing of the claims, since this is a reissue application (see, e.g., 37 C.F.R. §§ 1.121(h) and 1.173(b)).

across said first and second electrodes;

a matrix wire configuration comprising row wires and column wires respectively corresponding to the rows and columns of the electron emission elements arranged in the matrix;

a signal applier, arranged for applying (i) a scan signal to the row wires, and (ii) a modulation signal to the column wires corresponding to the scanned electron emission elements, to cause a low voltage to be applied across the first and second electrodes of each electron emission element, wherein the signal applier applies the modulation signal to the column wires in synchronization with the application of the scan signal to the row wires; and

a fluorescent device plate including:

a transparent substrate,

a fluorescent layer,

an acceleration electrode, and

an acceleration voltage applier, arranged for applying an acceleration voltage to the acceleration electrode,

wherein a space between the electron source plate and the fluorescent device plate is maintained in a vacuumized condition by a housing, and the signal applier is disposed outside of the housing, and

wherein said fluorescent layer is located at an inner side of said fluorescent device plate, disposed above said electron emission elements.

69. (Three Times Amended) A display apparatus comprising:
an electron source plate, having a substrate and a plurality of
electron-emitting devices arranged in a matrix of rows and columns on the substrate, said
electron source plate also comprising a matrix configuration of a plurality of row wires and
N column wires respectively corresponding to the rows and columns of the electron-
emitting devices arranged in the matrix, each of said N column wires being connected
exclusively to a corresponding one of N column leads;

a fluorescent device plate having a fluorescent layer and an
acceleration electrode;

a housing having a structure adapted for maintaining a vacuumized
condition in a space between said electron source plate and said fluorescent device plate, at
least a portion of said structure being formed by said electron source plate and said
fluorescent device plate; and

a voltage applier disposed outside of the housing, and arranged for
applying (1) a scan signal to the row wires, (2) a modulation signal to the column wires,
and (3) an acceleration voltage to the acceleration electrode to accelerate electrons emitted
from the electron-emitting devices toward the fluorescent layer of said fluorescent device
plate, the modulation signal comprising a series of one-row data of image data which is to
be assigned to the N column wires and each one-row data of image data in the series being
sequentially applied one-row data by one-row data to the N column leads in
synchronization with the scan signal.

wherein said fluorescent layer is located at an inner side of said
fluorescent device plate, disposed above said electron-emitting devices.

73. (Three Times Amended) A display apparatus comprising:
an electron source plate, having a substrate and a plurality of
electron-emitting devices arranged in a matrix of rows and columns on the substrate, said
electron source plate also comprising a matrix configuration of a plurality of row wires and
N column wires respectively corresponding to the rows and columns of the electron-
emitting devices arranged in the matrix, each of said N column wires being connected
exclusively to a corresponding one of N column leads;
a fluorescent device plate comprising a laminated layer having a
fluorescent layer and an acceleration electrode;
a housing having a structure adapted for maintaining a vacuumized
condition in a space between said electron source plate and said fluorescent device plate, at
least a portion of said structure being formed by said electron source plate and said
fluorescent device plate; and
a voltage applier disposed outside of the housing, and arranged for
applying (1) a scan signal to the row wires, (2) a modulation signal to the column wires,
and (3) an acceleration voltage to the acceleration electrode to accelerate electrons emitted
from the electron-emitting devices toward the fluorescent layer of said fluorescent device
plate, the modulation signal comprising a series of one-row data of image data which is to

be assigned to the N column wires and each one-row data of image data in the series being sequentially applied one-row data by one-row data to the N column leads in synchronization with the scan signal,

wherein said fluorescent layer is located at an inner side of said fluorescent device plate, disposed above said electron-emitting devices.

85. (Twice Amended) A display apparatus comprising:
an electron source plate, having a substrate and a plurality of
electron-emitting devices arranged in a matrix of rows and columns on the substrate, said
electron source plate also comprising a matrix configuration of a plurality of row wires and
N column wires respectively corresponding to the rows and columns of the electron-
emitting devices arranged in the matrix, each of said N column wires being connected
exclusively to a corresponding one of N column leads;

a fluorescent device plate comprising a laminated layer having a
fluorescent layer and an acceleration electrode;

a housing having a structure adapted for maintaining a vacuumized
condition in a space between said electron source plate and said fluorescent device plate, at
least a portion of said structure being formed by said electron source plate and said
fluorescent device plate; and

leads extending from inside of said housing to outside of said
housing, and arranged for applying (1) a scan signal to the row wires, (2) a modulation

signal to the column wires, and (3) an acceleration voltage to the acceleration electrode to accelerate electrons emitted from the electron-emitting devices toward the fluorescent layer of said fluorescent device plate, the modulation signal comprising a series of one-row data of image data which is to be assigned to the N column wires and each one-row data of image data in the series being sequentially applied one-row data by one-row data to the N column leads in synchronization with the scan signal,

wherein said fluorescent layer is located at an inner side of said fluorescent device plate, disposed above said electron-emitting devices.